

## REMARKS

Applicants appreciate the Examiner's thorough examination of the present application as evidenced by the Office Action of February 14, 2007 (hereinafter "Office Action"). In response, Applicants have amended independent Claims 6 and 15 by incorporating the recitations of Claims 10 and 21, respectively, to clarify that a conductive layer is formed between the pair of mesa regions and a portion thereof is removed so that an upper surface of the first insulating layer is exposed. Dependent Claims 10 and 21 have been canceled without prejudice or disclaimer and the dependencies of Claims 11, 14, and 22 have been corrected in light of the cancellation of Claims 10 and 21. Dependent Claim 18 has been amended to correct an antecedent basis issue in light of the amendment to Claim 15.

Applicants respectfully submit that the cited reference fails to disclose at least the recitations of the independent claims as amended. Accordingly, Applicants submit that all pending claims are in condition for allowance. Favorable reconsideration of all pending claims is respectfully requested for at least the reasons discussed hereafter.

### **Independent Claims 6 and 15 are Patentable**

Independent Claim 6 stands rejected under 35 U.S.C. §102(b) as being anticipated by U. S. Patent No. 4,996,167 to Chen (hereinafter "Chen"). (Office Action, page 2). Independent Claim 6 has been amended by incorporating recitations from dependent Claim 10 to clarify that a conductive layer is formed between the pair of mesa regions and a portion thereof removed so that an upper surface of the first insulating layer is exposed. Independent Claim 6 now recites, in part:

...

forming a pattern comprising a pair of mesa regions on a substrate;  
forming a first insulating layer on the pair of mesa regions;  
forming a second insulating layer on the pair of mesa regions and the substrate;  
forming a capping layer on the second insulating layer;  
patterning the capping layer and the second insulating layer together such that parts of the first insulating layer that were covered by the second insulating layer are exposed without exposing the mesa regions under the first insulating layer;

forming insulating spacers on sidewalls of the second insulating layer such that the second insulating layer is enclosed by the insulating spacers, the capping layer, the first insulating layer, and the substrate;

forming a conductive layer on the pair of mesa regions and the substrate so as to fill a contact region between the pair of mesa regions and to cover the mesa regions; and

removing a portion of the conductive layer such that an upper surface of the first insulating layer, opposite the substrate, is exposed. (Emphasis added).

Independent Claim 15 includes recitations similar to those of Claim 6 reproduced above. This aspect of the present invention is shown, for example, in FIGS. 8A and 9A where the conductive layer 60 fills the contact region 14 between the mesas 20 and an upper surface of the insulating layer 22 is exposed.

In rejecting Claims 10 and 21, the Office Action cites FIG. 6 of Chen as disclosing the recitations of Claim 6 highlighted above. (Office Action, page 3). As highlighted above, however, the conductive layer is formed so as to fill a contact region between the mesa regions. By contrast, the conductive layer 23 shown in FIG. 6 of Chen does not fill a contact region between the mesas 7. Instead, the conductive layer 23 is disposed on top of the nitride layer 11 between the mesas 7 and does not make contact with the source/drain region 5 between the mesas 7.

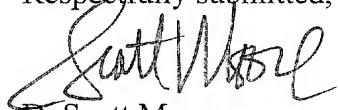
Accordingly, for at least the foregoing reasons, Applicants respectfully submit that independent Claims 6 and 15 are patentable over Chen and that Claims 7 – 9, 11 - 14, 16 - 20, and 22 - 24 are patentable at least per the patentability of independent Claims 6 and 15.

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### CONCLUSION

In light of the above amendments and remarks, Applicants respectfully submit that the above-entitled application is now in condition for allowance. Favorable reconsideration of this application, as amended, is respectfully requested. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney at (919) 854-1400.

Respectfully submitted,



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**CERTIFICATION OF TRANSMISSION**

I hereby certify that this correspondence is being transmitted via the Office electronic filing system in accordance with § 1.6(a)(4) to the U.S. Patent and Trademark Office on June 11, 2007

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